<u>IN THE CLAIMS</u>

Please amend the claims as indicated in the complete listing of pending claims listed below.

1. (Currently amended) A method for accessing data from an enterprise data system via user voice input, comprising:

authenticating the user using a login process in which the user is identified by a unique voice user identifier;

transparently logging the user into the enterprise data system through use of information obtained during authentication of the user;

enabling the user to request an ad hoc query be performed against data stored by the enterprise data system using a spoken natural language query <u>and enabling the user to navigate in the enterprise data system using spoken navigation</u>;

converting the spoken natural language query into a data query and executing the data query to retrieve any data in the enterprise data system corresponding to the ad hoc query;

providing feedback data corresponding to data retrieved from the enterprise data system in a verbal format to the user.

2. (Original) The method of claim 1, wherein the data query includes reference to a unique enterprise data system user identifier such that the ad hoc query returns user-specific data.

3. (Original) The method of claim 1, wherein the user is enabled to log into the voice access systems using the unique user identifier and a personal identification number (PIN).

4.   (Original) The method of claim 1, further comprising:

converting the spoken natural language query into a data request in an application-

readable form;

identifying one or more object(s) and data criteria corresponding the spoken natural

language query by processing the data request; and

formulating the data query based on any objects and data criteria that are identified.

5.   (Original) The method of claim 4, wherein the enterprise data system includes an object

manager and data manager that are used to enable access to data stored in an enterprise

database, further comprising:

passing information corresponding to any objects and data criteria that are identified to

the object manager;

formulating a database query based on the objects and data criteria passed to the object

manager in consideration of enterprise database schema information available to

the data manager;

submitting the database query to the enterprise database;

receiving a result set back from the enterprise database in response to the database query;

and

processing the result set to produce the feedback data.

6.   (Original) The method of claim 5, further comprising:

extracting object data from the result set; and

defining a prompt and slotted data string corresponding to a grammatical form in which

data are to be presented to a user.

embedding the object data into slots in the prompt and slotted data string to produce the

feedback data.

7.   (Original) The method of claim 1, wherein converting the spoken natural language query into the data query comprises:

receiving user voice input as digital waveform data;

passing the digital waveform data to a voice recognition component;

receiving application-readable data from the voice recognition component corresponding to the spoken natural language query; and

processing the application-readable data to determine what data the user desires to retrieve.

8.   (Original) The method of claim 2, further comprising:

defining a grammar syntax language comprising a plurality of grammars specifying grammatical formatting of legal user inputs; and

determining what the user desires to retrieve by processing user voice input in consideration of the grammar syntax language.

9.   (Original) The method of claim 1, wherein providing feedback data corresponding to data retrieved from the enterprise data system in a verbal format to the user comprises:

defining a text and slotted data string corresponding to a grammatical form in which data are to be presented to a user;

embedding data retrieved from the enterprise data system in slots defined in the text and slotted data string to form an embedded data text string;

passing the embedded data text string to a text-to-speech conversion component;

receiving digital waveform data from the text-to-speech conversion component corresponding to the embedded data text string;

streaming the digital waveform data to a device that produces an audible sound in response to processing the digital waveform data to produce a verbalized feedback to the user.

10. (Original) The method of claim 9, wherein a plurality of text and slotted data strings are defined, each corresponding to a respective system response, further comprising:

determining a current navigation context of the user; and

selecting an appropriate text and slotted data string from among said plurality of text and slotted data strings based, at least in part, on the current navigation context of the user.

11. (Original) The method of claim 9, wherein a plurality of text and slotted data strings are defined, each corresponding to a respective system response, further comprising:

identifying attributes corresponding to data retrieved from the enterprise data system; and

selecting an appropriate text and slotted data string from among said plurality of text and slotted data strings based, at least in part, on any attributes corresponding to data retrieved from the enterprise data system that are identified.

12. (Original) The method of claim 1, wherein providing feedback data corresponding to data retrieved from the enterprise data system in a verbal format to the user comprises:

storing a plurality of prompt audio files, each comprising prompt digital waveform data that when processed produces a verbalized prompt comprising one or more words;

defining a prompt identifier and slotted data string specifying a grammatical form in which data are to be presented to a user by identifying prompt audio files to be streamed and defining in order specifying where data are to be inserted relative to any prompts audio files that are identified;

passing data retrieved from the enterprise data system to a text-to-speech conversion component;

receiving text-to-speech (TTS) digital waveform data from the text-to-speech conversion component corresponding to the data passed to it;

streaming prompt and TTS digital waveform data to a device that produces an audible

sound in response to processing the digital waveform data to produce a verbalized

feedback to the user, wherein portions of the prompt and TTS digital waveform

data are streamed, in order, based on an ordered defined by the prompt identifier

and slotted data string, and prompt digital waveform data is retrieved from prompt

audio files corresponding to the prompt identifiers.

13.   (Original) The method of claim 12, wherein a plurality of prompt identifier and slotted

data strings are defined, each corresponding to a respective system response, further

comprising:

determining a current navigation context of the user; and

selecting an appropriate prompt and slotted data string from among said plurality of text

and slotted data strings based, at least in part, on the current navigation context of

the user.

14.   (Original) The method of claim 12, wherein a plurality of prompt identifier and slotted

data strings are defined, each corresponding to a respective system response, further

comprising:

identifying attributes corresponding to data retrieved from the enterprise data system; and

selecting an appropriate prompt identifier and slotted data string from among said

plurality of text and slotted data strings based, at least in part, on any attributes

corresponding to data retrieved from the enterprise data system that are identified.

15.   (Currently amended) A method for accessing an enterprise data system via a voice

communications device, comprising:

enabling a user to establish a communications connection to a voice access system;

authenticating the user with the voice access system using a login process in which the user is identified by a unique user identifier;

determining enterprise data system log-in data that enables the user to access the enterprise data system, based on the unique user identifier for the voice access system;

automatically logging the user into the enterprise data system using the enterprise data system log-in data;

enabling the user to request an ad hoc query be performed against data stored by the enterprise data system using a spoken natural language query and enabling the user to navigate in the enterprise data system using spoken navigation;

converting the spoken natural language query into a data query and executing the data query to retrieve any data in the enterprise data system corresponding to the ad hoc query;

providing feedback data corresponding to data retrieved from the enterprise data system in a verbal format to the user via the communications connection.

16.   (Original) The method of claim 15, wherein the voice communications device comprises a telephone and the user is enabled to log into the voice access systems using the unique user identifier and a personal identification number (PIN), each of which may be entered using a keypad on the telephone or via a verbal user input.

17.   (Original) The method of claim 15, further comprising:

converting the spoken natural language query into a data request in an application-readable form;

processing the data request to identify one or more object(s) and data selection criteria corresponding the spoken natural language query; and

formulating the data query based on any objects and data selection criteria that are

identified.

18.   (Original) The method of claim 17, wherein the enterprise data system includes an object

manager and data manager that are used to enable access to data stored in an enterprise

database, further comprising:

passing information corresponding to any objects and data selection criteria that are

identified to the object manager;

formulating a database query based on the objects and data selection criteria passed to the

object manager in consideration of enterprise database schema information

available to the data manager;

submitting the database query to the enterprise database; and

receiving a result set back from the enterprise database in response to the database query.

19.   (Original) The method of claim 18, wherein use of the object manager and data manager

abstracts objects from how data corresponding to the objects are stored in the enterprise

database such that a schema of the enterprise database may be changed without requiring

any changes to any voice access system component that is external to the enterprise data

system.

20.   (Original) The method of claim 15, further comprising:

retrieving data pertaining to a selected object for the user from the enterprise data system

through use of the unique user identifier upon login to the voice access system;

and

providing feedback data corresponding to any data that are retrieved in a verbal format to

the user via the communications connection.

21.　(Original) A method for accessing an enterprise data system via a telephone, comprising:

enabling a user to establish a telephone connection to a voice access system;

authenticating the user with the voice access system using a login process in which the

user is identified by a unique user identifier;

determining enterprise data system log-in data that enables the user to access the

enterprise data system, based on the unique user identifier for the voice access

system;

automatically logging the user into the enterprise data system using the enterprise data

system log-in data;

providing a voice user interface that enables the user to navigate and query data from a

plurality of domains using spoken navigation and natural language query

commands, wherein each domain comprises data corresponding to a respective

type of object in the enterprise data system; and

providing feedback data in a verbal format to the user via the telephone connection in

response to spoken navigation and natural language query commands, said

feedback data including data corresponding to data retrieved from the enterprise

data system in response to the natural language query commands and system

prompts in response to the spoken navigation commands.

22.　(Original) The method of claim 21, wherein the voice user interface includes a set of

global voice commands that enables the user to jump from a current domain to a new

domain.

23. ,　(Original) The method of claim 21, wherein the voice user interface includes voice

commands that are context sensitive to a current navigation context of the user, such that

the user may navigate to another navigation context from a current navigation context

using navigation voice commands that are based, at least in part, on the current navigation context of the user.

24. (Previously presented) The method of claim 21, further comprising:

generating a data query to retrieve data from the enterprise data system, said data query returning a plurality of data sets pertaining to an object to which an_ad hoc query of a spoken natural language query command; and

enabling the user to browse the plurality of data sets using verbal input.

25. (Original) The method of claim 21, further comprising:

maintaining navigation tracking information for the user that identifies navigation locations the user has previously navigated to; and

selecting system prompts based on the navigation tracking information for the user such that the user is presented with a different system prompt if the user has not previously navigated to a current navigation location than the user is presented with if the user has previously navigated to the current navigation location.

26. (Previously presented) The method of claim 21, wherein the spoken navigation and natural language query commands includes an hoc query which comprises a request to retrieve data corresponding to a domain the user is currently in that is provided to the enterprise data system and returns a plurality of data sets comprising header data identifying items pertaining to the current domain, further comprising:

enabling the user to browse the header data on an item-by-item basis using verbal navigation commands; and

reading the header data corresponding to each item in response to a user navigation to that item.

27.   (Original) The method of claim 26, further comprising:

enabling the user to request detail information corresponding to an item that is currently

being browsed;

retrieving detail information from the enterprise database corresponding to the item

currently being browsed; and

reading the detail information to the user via the telephone connection.

28.   (Original) A method for accessing an enterprise data system via telephone using a voice

access system, comprising:

defining a set of grammars comprising a language and syntax in which data are stored as

phonetic representations of the data;

retrieving selected data from the enterprise data system;

pre-compiling at least a portion of the selected data into predefined forms corresponding

to the set of grammars;

storing the pre-compiled data in a local database that is apart from the enterprise data

system;

enabling a user to request an ad hoc query be performed against data stored in the

enterprise data system and/or local database using a spoken natural language

query;

converting the spoken natural language query into a data request and retrieving data from

the enterprise data system and/or local database corresponding to the ad hoc

query; and

providing feedback data corresponding to data that are retrieved in a verbal format to the

user via the telephone connection.

29.   (Original) The method of claim 28, wherein header data that are used to identify objects are stored in the local database while detail data corresponding to the objects are stored in the enterprise database.

30.   (Original) The method of claim 28, further comprising:

defining a set of objects for which data are to be pre-compiled;

defining a schedule identifying when data corresponding to the set of objects are to be
pre-compiled; and

pre-compiling data corresponding to those objects based on the schedule.

31 - 34.   (Cancelled)